

## **RAW SEQUENCE LISTING**

**The Biotechnology Systems Branch of the Scientific and Technical  
Information Center (STIC) no errors detected.**

Application Serial Number: 10/699,562  
Source: 1Fw0  
Date Processed by STIC: 1/27/05

# ***ENTERED***



IFWO

RAW SEQUENCE LISTING                      DATE: 01/27/2005  
 PATENT APPLICATION:    US/10/699,562              TIME: 10:43:17

Input Set : A:\39754-0974A US saved January 12 2005.txt  
 Output Set: N:\CRF4\01272005\J699562.raw

4 <110> APPLICANT: THE REGENTS OF THE UNIVERSITY OF CALIFORNIA  
 5        JIANG, Tao  
 6        TSIEN, Roger Y.  
 8 <120> TITLE OF INVENTION: PEPTIDES WHOSE UPTAKE BY CELLS IS  
 9        CONTROLLABLE  
 11 <130> FILE REFERENCE: 39754-0974A US  
 C--> 13 <140> CURRENT APPLICATION NUMBER: US/10/699,562  
 14 <141> CURRENT FILING DATE: 2003-10-31  
 16 <160> NUMBER OF SEQ ID NOS: 49  
 18 <170> SOFTWARE: FastSEQ for Windows Version 4.0  
 20 <210> SEQ ID NO: 1  
 21 <211> LENGTH: 6  
 22 <212> TYPE: PRT  
 23 <213> ORGANISM: Artificial Sequence  
 25 <220> FEATURE:  
 26 <223> OTHER INFORMATION: synthetic polypeptide  
 28 <400> SEQUENCE: 1  
 29 Pro Leu Gly Leu Ala Gly  
 30    1                      5  
 33 <210> SEQ ID NO: 2  
 34 <211> LENGTH: 7  
 35 <212> TYPE: PRT  
 36 <213> ORGANISM: Artificial Sequence  
 38 <220> FEATURE:  
 39 <223> OTHER INFORMATION: synthetic polypeptide  
 41 <400> SEQUENCE: 2  
 42 Glu Asp Asp Asp Asp Lys Ala  
 43    1                      5  
 46 <210> SEQ ID NO: 3  
 47 <211> LENGTH: 18  
 48 <212> TYPE: PRT  
 49 <213> ORGANISM: Artificial Sequence  
 51 <220> FEATURE:  
 52 <223> OTHER INFORMATION: synthetic polypeptide  
 W--> 54 <221> NAME/KEY: UNSURE  
 55 <222> LOCATION: 8, 18  
 56 <223> OTHER INFORMATION: aminocaproic acid linker  
 W--> 58 <400> 3  
 W--> 59 Glu Asp Asp Asp Asp Lys Ala Xaa Arg Arg Arg Arg Arg Arg Arg  
 60    1                      5                      10                      15  
 61 Arg Xaa  
 65 <210> SEQ ID NO: 4  
 66 <211> LENGTH: 8

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67 <212> TYPE: PRT
68 <213> ORGANISM: Artificial Sequence
70 <220> FEATURE:
71 <223> OTHER INFORMATION: synthetic polypeptide
73 <400> SEQUENCE: 4
74 Arg Arg Arg Arg Arg Arg Arg Arg
75 1 5
78 <210> SEQ ID NO: 5
79 <211> LENGTH: 22
80 <212> TYPE: PRT
81 <213> ORGANISM: Artificial Sequence
83 <220> FEATURE:
84 <223> OTHER INFORMATION: synthetic polypeptide
W--> 86 <221> NAME/KEY: UNSURE
87 <222> LOCATION: 1, 12
88 <223> OTHER INFORMATION: aminocaproic acid linker
W--> 90 <400> 5
W--> 91 Xaa Cys Arg Arg Arg Arg Arg Arg Arg Arg Arg Arg Xaa Glu Glu Glu Glu
92 1 5 10 15
93 Glu Glu Glu Glu Glu Cys
94 20
97 <210> SEQ ID NO: 6
98 <211> LENGTH: 17
99 <212> TYPE: PRT
100 <213> ORGANISM: Artificial Sequence
102 <220> FEATURE:
103 <223> OTHER INFORMATION: synthetic polypeptide
W--> 105 <221> NAME/KEY: UNSURE
106 <222> LOCATION: 1, 7
107 <223> OTHER INFORMATION: aminocaproic acid linker
W--> 109 <400> 6
W--> 110 Xaa Cys Glu Glu Glu Glu Xaa Arg Arg Arg Arg Arg Arg Arg Arg Arg
111 1 5 10 15
112 Cys
116 <210> SEQ ID NO: 7
117 <211> LENGTH: 23
118 <212> TYPE: PRT
119 <213> ORGANISM: Artificial Sequence
121 <220> FEATURE:
122 <223> OTHER INFORMATION: synthetic polypeptide
W--> 124 <221> NAME/KEY: UNSURE
125 <222> LOCATION: 12, 22
126 <223> OTHER INFORMATION: aminocaproic acid linker
W--> 128 <400> 7
W--> 129 Glu Glu Glu Glu Glu Asp Asp Asp Asp Lys Ala Xaa Arg Arg Arg Arg
130 1 5 10 15
131 Arg Arg Arg Arg Arg Xaa Cys
132 20
135 <210> SEQ ID NO: 8

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136 <211> LENGTH: 19
137 <212> TYPE: PRT
138 <213> ORGANISM: Artificial Sequence
140 <220> FEATURE:
141 <223> OTHER INFORMATION: synthetic polypeptide
W--> 143 <221> NAME/KEY: UNSURE
144 <222> LOCATION: 8, 18
145 <223> OTHER INFORMATION: aminocaproic acid linker
W--> 147 <400> 8
W--> 148 Glu Asp Asp Asp Asp Lys Ala Xaa Arg Arg Arg Arg Arg Arg Arg Arg
149 1 5 10 15
150 Arg Xaa Cys
154 <210> SEQ ID NO: 9
155 <211> LENGTH: 22
156 <212> TYPE: PRT
157 <213> ORGANISM: Artificial Sequence
159 <220> FEATURE:
160 <223> OTHER INFORMATION: synthetic polypeptide
W--> 162 <221> NAME/KEY: UNSURE
163 <222> LOCATION: 21
164 <223> OTHER INFORMATION: aminocaproic acid linker
W--> 166 <400> 9
167 Glu Glu Glu Glu Glu Asp Asp Asp Asp Lys Ala Arg Arg Arg Arg Arg
168 1 5 10 15
W--> 169 Arg Arg Arg Arg Xaa Cys
170 20
173 <210> SEQ ID NO: 10
174 <211> LENGTH: 20
175 <212> TYPE: PRT
176 <213> ORGANISM: Artificial Sequence
178 <220> FEATURE:
179 <223> OTHER INFORMATION: synthetic polypeptide
W--> 181 <221> NAME/KEY: UNSURE
182 <222> LOCATION: 9, 19
183 <223> OTHER INFORMATION: aminocaproic acid linker
W--> 185 <400> 10
W--> 186 Glu Glu Asp Asp Asp Asp Lys Ala Xaa Arg Arg Arg Arg Arg Arg Arg
187 1 5 10 15
188 Arg Arg Xaa Cys
189 20
192 <210> SEQ ID NO: 11
193 <211> LENGTH: 19
194 <212> TYPE: PRT
195 <213> ORGANISM: Artificial Sequence
197 <220> FEATURE:
198 <223> OTHER INFORMATION: synthetic polypeptide
W--> 200 <221> NAME/KEY: UNSURE
201 <222> LOCATION: 18
202 <223> OTHER INFORMATION: amiocaproic acid linker

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```

W--> 204 <400> 11
      205 Asp Asp Asp Asp Asp Asp Lys Ala Arg Arg Arg Arg Arg Arg Arg Arg
      206 1          5          10          15
W--> 207 Arg Xaa Cys
      211 <210> SEQ ID NO: 12
      212 <211> LENGTH: 23
      213 <212> TYPE: PRT
      214 <213> ORGANISM: Artificial Sequence
      216 <220> FEATURE:
      217 <223> OTHER INFORMATION: synthetic polypeptide
W--> 219 <221> NAME/KEY: UNSURE
      220 <222> LOCATION: 10, 13, 16, 19, 22
      221 <223> OTHER INFORMATION: aminocaproic acid linker
W--> 223 <400> 12
W--> 224 Glu Glu Asp Asp Asp Asp Lys Ala Arg Xaa Arg Arg Xaa Arg Arg Xaa
      225 1          5          10          15
      226 Arg Arg Xaa Arg Arg Xaa Cys
      227          20
      230 <210> SEQ ID NO: 13
      231 <211> LENGTH: 24
      232 <212> TYPE: PRT
      233 <213> ORGANISM: Artificial Sequence
      235 <220> FEATURE:
      236 <223> OTHER INFORMATION: synthetic polypeptide
W--> 238 <221> NAME/KEY: UNSURE
      239 <222> LOCATION: 7, 23
      240 <223> OTHER INFORMATION: aminocaproic acid linker
W--> 242 <400> 13
W--> 243 Glu Glu Glu Glu Glu Glu Xaa Pro Leu Gly Leu Ala Gly Arg Arg Arg
      244 1          5          10          15
      245 Arg Arg Arg Arg Arg Arg Xaa Cys
      246          20
      249 <210> SEQ ID NO: 14
      250 <211> LENGTH: 17
      251 <212> TYPE: PRT
      252 <213> ORGANISM: Artificial Sequence
      254 <220> FEATURE:
      255 <223> OTHER INFORMATION: synthetic polypeptide
      257 <400> SEQUENCE: 14
      258 Glu Glu Glu Glu Glu Glu Cys Arg Arg Arg Arg Arg Arg Arg Arg
      259 1          5          10          15
      260 Cys
      264 <210> SEQ ID NO: 15
      265 <211> LENGTH: 7
      266 <212> TYPE: PRT
      267 <213> ORGANISM: Artificial Sequence
      269 <220> FEATURE:
      270 <223> OTHER INFORMATION: synthetic polypeptide
      272 <400> SEQUENCE: 15

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Input Set : A:\39754-0974A US saved January 12 2005.txt

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```

273 Glu Glu Glu Glu Glu Glu Cys
274 1 5
277 <210> SEQ ID NO: 16
278 <211> LENGTH: 10
279 <212> TYPE: PRT
280 <213> ORGANISM: Artificial Sequence
282 <220> FEATURE:
283 <223> OTHER INFORMATION: synthetic polypeptide
285 <400> SEQUENCE: 16
286 Arg Arg Arg Arg Arg Arg Arg Arg Arg Cys
287 1 5 10
290 <210> SEQ ID NO: 17
291 <211> LENGTH: 11
292 <212> TYPE: PRT
293 <213> ORGANISM: Artificial Sequence
295 <220> FEATURE:
296 <223> OTHER INFORMATION: synthetic polypeptide
W--> 298 <221> NAME/KEY: UNSURE
299 <222> LOCATION: -4; 10
300 <223> OTHER INFORMATION: aminocaproic acid linker
W--> 302 <400> 17
W--> 303 Glu Asp Ala Xaa Arg Arg Arg Arg Arg Xaa Cys
304 1 5 10
307 <210> SEQ ID NO: 18
308 <211> LENGTH: 16
309 <212> TYPE: PRT
310 <213> ORGANISM: Artificial Sequence
312 <220> FEATURE:
313 <223> OTHER INFORMATION: synthetic polypeptide
W--> 315 <221> NAME/KEY: UNSURE
316 <222> LOCATION: 8, 15
317 <223> OTHER INFORMATION: aminocaproic acid linker
W--> 319 <400> 18
W--> 320 Glu Asp Asp Asp Asp Lys Ala Xaa Arg Arg Arg Arg Arg Arg Xaa Cys
321 1 5 10 15
324 <210> SEQ ID NO: 19
325 <211> LENGTH: 23
326 <212> TYPE: PRT
327 <213> ORGANISM: Artificial Sequence
329 <220> FEATURE:
330 <223> OTHER INFORMATION: synthetic polypeptide
W--> 332 <221> NAME/KEY: UNSURE
333 <222> LOCATION: 12, 22
334 <223> OTHER INFORMATION: aminocaproic acid linker
W--> 336 <400> 19
W--> 337 Glu Glu Glu Asp Asp Asp Glu Glu Glu Asp Ala Xaa Arg Arg Arg Arg
338 1 5 10 15
339 Arg Arg Arg Arg Arg Xaa Tyr
340 20

```

RAW SEQUENCE LISTING ERROR SUMMARY  
PATENT APPLICATION: US/10/699,562

DATE: 01/27/2005  
TIME: 10:43:18

Input Set : A:\39754-0974A US saved January 12 2005.txt  
Output Set: N:\CRF4\01272005\J699562.raw

Please Note:

Use of n and/or Xaa have been detected in the Sequence Listing. Please review the Sequence Listing to ensure that a corresponding explanation is presented in the <220> to <223> fields of each sequence which presents at least one n or Xaa.

Seq#:3; Xaa Pos. 8,18  
Seq#:5; Xaa Pos. 1,12  
Seq#:6; Xaa Pos. 1,7  
Seq#:7; Xaa Pos. 12,22  
Seq#:8; Xaa Pos. 8,18  
Seq#:9; Xaa Pos. 21  
Seq#:10; Xaa Pos. 9,19  
Seq#:11; Xaa Pos. 48  
Seq#:12; Xaa Pos. 10,13,16,19,22  
Seq#:13; Xaa Pos. 7,23  
Seq#:17; Xaa Pos. 4,10  
Seq#:18; Xaa Pos. 8,15  
Seq#:19; Xaa Pos. 12,22  
Seq#:20; Xaa Pos. 17,29  
Seq#:21; Xaa Pos. 16,32  
Seq#:22; Xaa Pos. 19,26,50  
Seq#:23; Xaa Pos. 11,19  
Seq#:24; Xaa Pos. 8,16  
Seq#:25; Xaa Pos. 13,22,33  
Seq#:26; Xaa Pos. 17,24,45  
Seq#:27; Xaa Pos. 15,22,40  
Seq#:28; Xaa Pos. 17,24,39  
Seq#:29; Xaa Pos. 3,4,5  
Seq#:35; Xaa Pos. 3  
Seq#:41; Xaa Pos. 2

## VERIFICATION SUMMARY

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Input Set : A:\39754-0974A US saved January 12 2005.txt

Output Set: N:\CRF4\01272005\J699562.raw

L:13 M:270 C: Current Application Number differs, Replaced Current Application Number  
 L:54 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!  
 L:58 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:3  
 L:59 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:3 after pos.:0  
 M:341 Repeated in SeqNo=3  
 L:86 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!  
 L:90 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:5  
 L:91 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:5 after pos.:0  
 L:105 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!  
 L:109 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:6  
 L:110 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:6 after pos.:0  
 L:124 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!  
 L:128 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:7  
 L:129 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:7 after pos.:0  
 M:341 Repeated in SeqNo=7  
 L:143 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!  
 L:147 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:8  
 L:148 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:8 after pos.:0  
 M:341 Repeated in SeqNo=8  
 L:162 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!  
 L:166 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:9  
 L:169 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:9 after pos.:16  
 L:181 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!  
 L:185 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:10  
 L:186 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:10 after pos.:0  
 M:341 Repeated in SeqNo=10  
 L:200 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!  
 L:204 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:11  
 L:207 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:11 after pos.:16  
 L:219 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!  
 L:223 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:12  
 L:224 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:12 after pos.:0  
 M:341 Repeated in SeqNo=12  
 L:238 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!  
 L:242 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:13  
 L:243 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:13 after pos.:0  
 M:341 Repeated in SeqNo=13  
 L:298 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!  
 L:302 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:17  
 L:303 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:17 after pos.:0  
 L:315 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!  
 L:319 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:18  
 L:320 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:18 after pos.:0  
 L:332 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!  
 L:336 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:19  
 L:337 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:19 after pos.:0  
 M:341 Repeated in SeqNo=19  
 L:351 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!



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Input Set : A:\39754-0974A US saved January 12 2005.txt

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L:355 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:20  
L:358 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:20 after pos.:16  
L:370 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!  
L:374 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:21  
L:375 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:21 after pos.:0  
M:341 Repeated in SeqNo=21  
L:391 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!  
L:395 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:22  
L:398 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:22 after pos.:16  
M:341 Repeated in SeqNo=22  
L:414 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!  
L:418 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:23  
L:419 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:23 after pos.:0  
M:341 Repeated in SeqNo=23  
L:433 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!  
L:437 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:24  
L:438 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:24 after pos.:0  
L:452 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!  
L:456 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:25  
L:457 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:25 after pos.:0  
M:341 Repeated in SeqNo=25  
L:473 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!  
L:477 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:26  
L:480 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:26 after pos.:16  
M:341 Repeated in SeqNo=26  
L:494 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!  
L:498 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:27  
L:499 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:27 after pos.:0  
M:341 Repeated in SeqNo=27  
L:515 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!  
L:519 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:28  
L:522 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:28 after pos.:16  
M:341 Repeated in SeqNo=28  
L:536 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!  
L:540 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:29  
L:544 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:29  
L:545 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:29 after pos.:0  
L:622 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!  
L:626 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:35  
L:627 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:35 after pos.:0  
L:704 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!  
L:708 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:41  
L:709 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:41 after pos.:0